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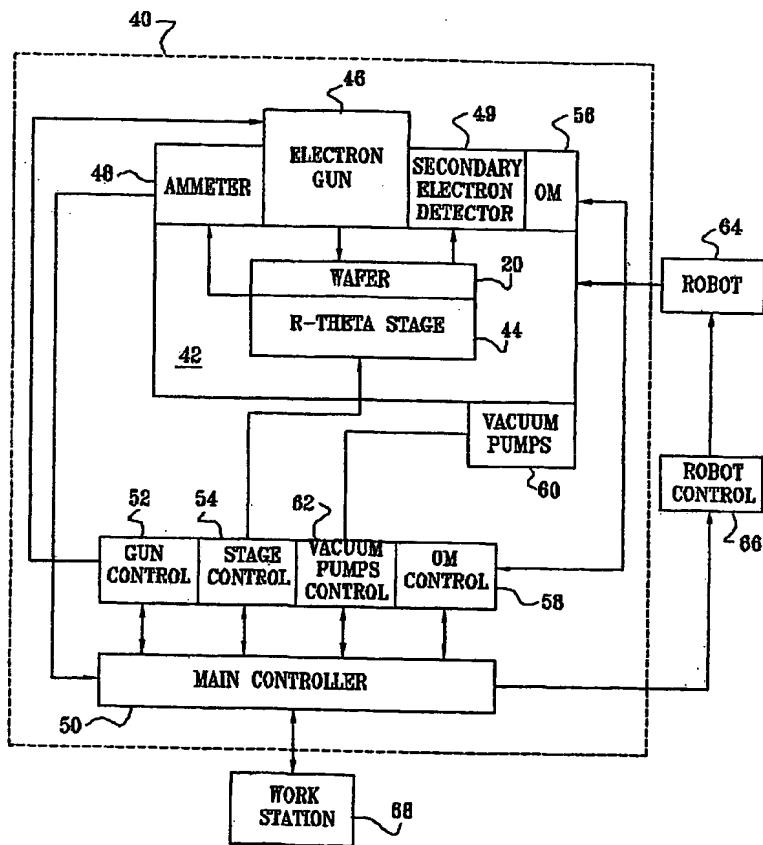
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[Continued on next page]

(54) Title: HIGH CURRENT ELECTRON BEAM INSPECTION



(57) Abstract: A method and apparatus for wafer inspection. The apparatus is capable of testing a sample having a first layer that is at least partly conductive and a second, dielectric layer formed over the first layer, following production of contact openings in the second layer, the apparatus includes: (i) an electron beam source adapted to direct a high current beam of charged particles to simultaneously irradiate a large number of contact openings at multiple locations distributed over an area of the sample; (ii) a current measuring device adapted to measure a specimen current flowing through the first layer in response to irradiation of the large number of contact openings at the multiple locations; and (iii) a controller adapted to provide an indication of the at least defective hole in response to the measurement.



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